



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A61K 31/20	A1	(11) International Publication Number: WO 96/28150 (43) International Publication Date: 19 September 1996 (19.09.96)
(21) International Application Number: PCT/NO95/00038 (22) International Filing Date: 20 February 1995 (20.02.95) (71)(72) Applicant and Inventor: ERIKSEN, Marit [NO/NO]; P.O. Box 43, N-9392 Stonglandseidet (NO).		(81) Designated States: CA, DK. Published <i>With international search report.</i> <i>In English translation (filed in Norwegian).</i>
(54) Title: THERAPEUTIC SKIN CREAM (57) Abstract A mixture of refined seal oil, beeswax, tree tar and/or aromatic flower oils, with a therapeutic effect on skin diseases, for external use on the skin.		

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AM	Armenia	GB	United Kingdom	MW	Malawi
AT	Austria	GE	Georgia	MX	Mexico
AU	Australia	GN	Guinea	NE	Niger
BB	Barbados	GR	Greece	NL	Netherlands
BE	Belgium	HU	Hungary	NO	Norway
BF	Burkina Faso	IE	Ireland	NZ	New Zealand
BG	Bulgaria	IT	Italy	PL	Poland
BJ	Benin	JP	Japan	PT	Portugal
BR	Brazil	KE	Kenya	RO	Romania
BY	Belarus	KG	Kyrgyzstan	RU	Russian Federation
CA	Canada	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic	KR	Republic of Korea	SE	Sweden
CG	Congo	KZ	Kazakhstan	SG	Singapore
CH	Switzerland	LJ	Liechtenstein	SI	Slovenia
CI	Côte d'Ivoire	LK	Sri Lanka	SK	Slovakia
CM	Cameroon	LR	Liberia	SN	Senegal
CN	China	LT	Lithuania	SZ	Swaziland
CS	Czechoslovakia	LU	Luxembourg	TD	Chad
CZ	Czech Republic	LV	Latvia	TG	Togo
DE	Germany	MC	Monaco	TJ	Tajikistan
DK	Denmark	MD	Republic of Moldova	TT	Trinidad and Tobago
EE	Estonia	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	UG	Uganda
FI	Finland	MN	Mongolia	US	United States of America
FR	France	MR	Mauritania	UZ	Uzbekistan
GA	Gabon			VN	Viet Nam

THERAPAUTIC SKIN CREAM

The invention concerns a mixture of seal oil, beeswax, with tree tar and perfume eventually added, with a therapautic effect on skin diseases, as for example psoriasis, atopic exema, dry skin and broken lips.

Seal hunting has taken place for at least a thousand years. The meat has been used for food, the skin for clothing and other useful things, and the blubber for different oil products.

Seal oil has had the same usage as whale oil. Among other things it has been used in lamps to create light, and also as a nutrition added to the food ordinary consumed by the population. An other use of the oil has been as a base for paint, called oil paint.

The effect of the oil adjusted the human body has been known for many years. Seal- and whale oil has roughly the same structure as ordinary fish oil. Science has recently discovered that the combination of fatty acids from seals and whales are somewhat better and more useful for the human body. This concerns the number and amount of s.k. monosaturated fatty acids.

The combination of fatty acids in seal oil is described in the following way: The type of fatty acid is written in parenthesis, the first number is the amount of carbonatoms, number after the colon is the amount of doble bindings in the fatty acid. The combination given in areal % concerns the refined seal oil. All oil used in the product concerned is refined.

Saturated fatty acids: 12,5 15,4 (14:0, 16:0 18:0)

Monounsaturated fatty acids: 47,8 58,9 (14:1, 16:1, 18:1,
20:1, 22:1, 24:1)

Polyunsaturated fatty acids: 24,7 2,7 (18:2, 18:3, 18:4,
20:4, 20:5, 22:5, 22:6)

Vitamin E: 1,0 mg./g oil

Kolesterol: 1,3 mg./g oil

Seal oil has never earlier been used for medical purposes.

Lately there has been different scientific experiments around the medical effects of the seal oil. By now, there are very few scientific works to support that the seal oil has such effect. The science has so far mostly been done by The Norwegian Institute of Fisheries and Aquaculture, and the University of Tromsø. Among other documentation we mention "Some possible effects of dietary monosaturated fatty acids on cardiovascular disease" , by E. Elvevoll, O.Moen, R.L. Olsen and J. Brox, Atherosclerosis, 81(1990) p. 41 74, and "alternative use of the seal oil", by Jenssen, final report publishes by NFFR 3001-2300.043.

The research and science has so far been directed to the effects of internal use of the oil.

The cream contains two main components, seal oil, described earlier in this application, and beeswax.

Added to these main components are mixtures of tar and aromatic oils.

The second component is beeswax, which contains many different, and partly unidentified components.

The known components are ca. 70 % complicated fatty acids, 15 % organic acids, 12% carbohydrates and 1 % free alcohols. Beeswax is also rich in A-vitamins, with 4044 I.E. pr 100 kilograms.

The contents of beeswax is dependent on many variable factors, like where it is harvested, and time of year. The chart on the next page shows an analysis of beeswax from different times in the period of januar til july, and is made by the Norwegian Honey Harvesters Organization during 1991.

Date of production:	18.02	05.03	03.04	02.05	18.06	01.07	r.verdi
Number of acids:	18,9	18,2	23,1	23,1	22,4	22,4	17-24
Number of esters:	78,5	79,2	76,4	77,1	75,0	74,3	66-81
Number of saponification:	97,4	97,4	99,5	100,2	97,4	96,7	min.95%
Number of equivalents:	4,1	4,3	3,3	3,3	3,3	3,3	3,3-4,3
Melting point	62,0	62,5	62,0	62,0	63,0	62,5	62-65
Colour	G.br	G.br.	G.br.	G.br.	G.br.	G.br.	
Smell	Honn.	Honn.	Honn.	Honn.	Honn.	Honn.	
WeightG/cm3:	0.968	0.967	0.962	0.960	0.962	0.961	

In the last part of table 2 and 3 there are enshortenments for colour and smell characterized by the following

Y.Br.= Yellow-Brown, Honn. = Honey.

The parameters on the left side of the table is given a closer explanation underneath.

Number of acids: The beeswax contains acid. This acid is free, and is made during the storing of the wax, by hydrolysis. The number of acid characterizes the quality of the bees wax. You can measure the number of acid by titration with g/KOH/g.

It means by adding lye.

Number of saponification: Gives a distinction for the size of the molecules in the fatty acids of the wax. Big number means smaller molecules, and is a quality demand for beeswax. The border is between 95 and 100.

Number of esters: Is made of acid and alcohol separated in water. Esters are therefore considered anhydric connections between acid and alcohol. Wax is a big ester. Beeswax consist of esters and valuable alcohols. The Ester number is therefore an expression for how much ester it is compared to alcoh 1.

Beeswax today is well known for a certain antibiotic effect, and have among others turned out to be a positive help in the treatment of skin tuberculoses.

The cream can eventually also contain tree-tar. This contains resin and different drug substances brought forward by burning the trees in a special way. The tar develops as perspiration " from the tree-roots, during this slow burning. The exact mixture is dependent on factors as which kiln is being used, what sort of trees are being burnt, how slow/fast the burning is done, and also what combination of trees which are used.

To achieve a pleasant smell, the skin cream can be mixed with specific flower oils which have aromatic scents, at the same time as these oils are used in the homeopathic medicine for different types of skin disease.

This specific cream is made by heating the beeswax to the melting point, at a temperature of 60 -65 degrees C. The rest of the components are then heated to a similar temperature, and mixed in with the wax.

PATENTCLAIMS

1. A therapeutic mixture for external use on the skin, characterized by containing (50-80)% seal oil, (0-7)% tree tar, (20-50)% beeswax and eventually one or several aromatic oils.
2. A therapeutic mixture for external use on the skin, as mentioned in claim 1, characterized by the beeswax, which among other contents 70 % complicated fatty acids, 19% inorganic acids 12 % carbohydrates and 1 % free alcohols.
3. A therapeutic mixture for external use on the skin, as mentioned in claim 1, characterized by the seal oil, which contains (12,5- 15,4) saturated acids, (47,8-58,9)% monounsaturated fatty acids, (24,7 - 32,7)% polyunsaturated fatty acids, 1,0 mg/g oil vitamin E, and 1,3 mg/g oil cholesterol.
4. A therapeutic mixture for external use on the skin as mentioned in claim 1, characterized by the contents of the saturated fatty acids of the seal oil mainly is the types 14:0, 16:0 and 18:0.
5. A therapeutic mixture for external use on the skin as mentioned in claim 1, characterized by the monounsaturated fatty acids in the seal oil, which mainly is of the types 14:1, 16:1, 18:1, 20:1, 22:1, 24:1.
6. A therapeutic mixture for external use on the skin as mentioned in claim 1, characterized by the polyunsaturated fatty acids in the seal oil mainly is of the types 18:2, 18:3, 18:4, 20:4, 20:5 22:5, 22:6.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 95/00038

A. CLASSIFICATION OF SUBJECT MATTER		
IPC6: A61K 31/20 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC6: A61K		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
SE,DK,FI,NO classes as above		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
EMBASE, MEDLINE, CAPLUS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 4022815 A1 (B. BRAUN MELSUNGEN AG), 23 January 1992 (23.01.92), the claims --	1-6
A	Chemical Abstracts, Volume 110, No 3, 16 January 1989 (16.01.89), (Columbus, Ohio, USA), Ratnayake, W. M. N. et al, "Preparation of omega-3 PUFA concentrates from fish oils via urea complexation", THE ABSTRACT No 22481z, Fett Wiss. Technol. 1988, 90 (10), 381-386 --	1-6
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "B" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
2 October 1995		04.10.95
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86		Authorized officer Hans Bäckström Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 95/00038

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>Chemical Abstracts, Volume 122, No 3, 16 January 1995 (16.01.95), (Columbus, Ohio, USA), Christensen, Michael Soberg et al, "Lymphatic absorption of n-3 polyunsaturated fatty acids from marine oils with different intramolecular fatty acid distributions", THE ABSTRACT No 30475p, Biochim. Biophys. Acta 1994, 1215 (1/2), 198-204</p> <p>-- -----</p>	1-6

Information on patent family members

International application No.

28/08/95

PCT/NO 95/00038

Form PCT/ISA/210 (patent family annex) (July 1992)